EXPLANATION OF SIGNIFICANT DIFFERENCES FOR THE REMEDIAL ACTION PLAN, ALMADEN QUICKSILVER COUNTY PARK
San Jose, California

INTRODUCTION

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) is issuing this fact sheet to inform the community about significant changes to the Remedial Action Plan (RAP) for the Almaden Quicksilver County Park (Site). DTSC approved the RAP in December 19, 1994. The changes to the RAP include additional soil excavation and on-site containment of soil to address the last significant calcine deposits within the Park. This fact sheet satisfies requirements in Federal law that an Explanation of Significant Differences (ESD) be published by a lead agency when significant changes in the scope, performance, or cost of cleanup actions adopted in a remedy selection document occur, but do not fundamentally alter the selected remedy.

DTSC has been the lead agency overseeing the investigation and cleanup of hazardous substances released at the Site. The Santa Clara Valley Water District and Santa Clara County will be the lead agencies regarding the removal of remaining calcine deposits at the Site.

The selected RAP cleanup alternative focused on calcines at five separate areas within the park, the Mine Hill area, the Hacienda Furnace Yard, the Enriquita Mine Retort, the San Mateo Mine Retort and Senator Mine. The site remedy consisted of on-site containment measures to prevent human exposure and further release of mercury to surface waters. The primary components of the remedy were removal of calcines and mercury impacted soils from the Hacienda Furnace Yard and Senator Mine areas, and consolidation and capping of calcines and mercury impacted soils in the Mine Hill area of Almaden Quicksilver County Park. Other components of the remedy were construction of surface drainage ditches and erosion control improvements.

The human health risk-based cleanup levels were established for calcines/soils in each of the five areas addressed in the remedial action. The cleanup levels were area-specific to take into account the level of mercury vapor detected in each area. The cleanup levels ranged from 300 to 500 milligrams per kilogram (mg/kg). Additionally, the RAP recognized that the formerly mined areas in the park are subject to industrial stormwater discharge regulations promulgated pursuant to the Clean Water Act. Thus, the RAP identified the need for the remedial alternatives to address the release, or threat of release, of mercury by stormwater runoff. No associated numerical cleanup levels were established for this remedial objective. However, the selected remedial alternatives included erosion control measure.

Though all remedial activities conducted according to the RAP were completed by September 1999, significant calcine deposits were still present at the Park. This ESD documents removal and on-site containment of the last significant calcine deposits within the Park, namely areas within the Hacienda Furnace Yard and the Jacques Gulch areas. A more

detailed discussion of the specific changes that are being made to the RAP is presented in the "Description of Significant Differences" section.

SITE HISTORY AND CONTAMINATION

Mercury mining and ore processing were conducted at the Site from 1845 to 1975. Mercury occurs primarily in the mineral cinnabar (mercury sulfide). Mercury was extracted by heating the ore in retorts and furnaces to volatilize the mercury which was then condensed to liquid mercury. Processed ores (calcines) from the furnaces and retorts were dumped near the processing areas. All mining related operations ceased in 1975 when Santa Clara County purchased the property for use as a park. As a result of a detailed sampling and monitoring plan conducted 1998, eight areas within the Park were defined as where mining and/or processing was conducted and, therefore, where mercury contamination would be most likely. Five areas were chosen for remediation based on the results of a baseline risk assessment: Hacienda Furnace Yard, Mine Hill Area, Enriquita Mine Retort, San Mateo Mine Retort, and Senator Mine Area. Remediation work at the areas of concern was completed as of September 1999.

SELECTED REMEDY

The final remedial action focused on calcines at five separate areas within the park the Mine Hill area, the Hacienda Furnace Yard, the Enriquita Mine Retort, the San Mateo Mine Retort and Senator Mine. The highest total mercury concentration found during the remedial investigation was 1,700 mg/kg in an individual sample from the Enriquita Mine Retort. Average total mercury concentrations for the five areas ranged from 39 to 420 mg/kg. The site remedy consists of on-site containment measures which prevent human exposure and further release to surface waters. The primary components of the remedy are vegetated soil covers, construction of a 1500-foot long rock and wire mesh barrier along the bank of Alamitos Creek at Hacienda Furnace Yard, and construction of surface drainage ditches and erosion control improvements.

A risk assessment contained in the RAP established cleanup levels for calcines/soils in each of the five areas addressed in the remedial action at 300 to 500 milligrams per kilogram (mg/kg). Site use will not change. Therefore the selected remedy and associated cleanup criteria remains protective of human health and the environment.

DESCRIPTION OF EXPLANATION OF SIGNIFICANT DIFFERENCES

An additional 10,000 to 15,000 cubic yards of calcine material will be removed from three locations within the Hacienda Furnace Yard Area: Upper Hacienda, Lower Hacienda and Deep Gulch. The excavated material will be transported and consolidated in the "San Francisco Open Cut" portion of the Mine Hill area of the Park.

An additional 15,000 cubic yards of calcine material will also be removed from two locations from the Jacques Gulch area of the Park: Location A, which extends from the culvert beneath Alamitos Road at the confluence of the Almaden Reservoir in the Park, and Location

B, which is located in the Park and upstream from Location A, towards the Mine Hill area. The excavated material will be transported and consolidated in the "SF Open Cut" portion of the Mine Hill area of the Park. Details of the work to be conducted will be outlined in the Project Implementation Plan.

The proposed change is not expected to result in a significant change in the total cost of remediation. Total cost for the proposed project is estimated to be $1.3 million. Overall cost for the original remedial action was $4.6 million. An updated Health and Safety Plan will be prepared in accordance with current state and federal OSHA standards.

Considering the proposed projects, DTSC believes that the remedy becomes more protective of human health and the environment, complies with Federal, state and local requirements that are applicable or relevant and appropriate to the remedial action, and is cost effective. Further removal and containment of mercury impacted soils not only reduces the threat of exposure, but also reduces the potential for release of mercury by into surface water in the vicinity of the Site.